REMARKS

The independent claims have been amended for clarity as discussed in more detail below. The claim amendments should not be construed as acquiescence in any ground of rejection.

1. Objections

Claims 48, 114, 122, 131, 139, 147, 155, 163 and 171 are objected to because of alleged lack of clarity in the limitation "comprising a sequence of beta secretase encoding nucleotide consisting of nucleotides encoding...". The Examiner says that beta-secretase does not encode nucleotides. In reply, the term "beta-secretase" was used not as a noun but as a compound adjective in the phrase "beta-secretase encoding." Thus, applicants did intend to specify that beta secretase encodes nucleotides but vice versa. Nevertheless, this aspect of the claim has been amended so that it reads "nucleotides encoding beta secretase...." for greater clarity.

2.1 35 USC 112, second paragraph

Claims 48, 114, 122, 131, 139, 147, 155, 163 and 171 stand rejected on the basis that the use the open transition "comprising" and the closed transition "consisting of" in the same claim is confusing as to what is meant. In reply, it is respectfully submitted that the use of two transitional terms is appropriate because they modify different elements of the claim. The "consisting of" transition modifies the sequence of nucleotides encoding beta secretase. Thus, for example, in claim 48, the term "consisting of" means that the nucleotides encoding beta secretase consist of the nucleotides encoding the designated SEQ ID NO. (e.g., SEQ ID NO:43 for claim 48). In other words, the nucleic acid does not encode other parts of beta secretase except in the designated SEQ ID NO, in this case SEQ ID NO:43. The "comprising" transition modifies a different element of the claim that is the nucleic acid of which the sequence of nucleotides encoding beta secretase are a component. Such a nucleic acid may contain other nucleotides besides those encoding beta secretase. As the Examiner correctly recognizes

elsewhere in the office action, these nucleotides may include an initiation codon or a stop codon. They may also include regulatory sequences, a heterologous signal sequence or nucleotides encoding an epitope tag to be used for purification, for example. The initial "comprising" term conveys that nucleotides other than those encoding beta secretase may be present.

The Examiner is requested to reconsider the rejection in light of the above explanation. Although applicants are certainly willing to consider any alternative language the Examiner may propose, it is believed that the use of the open and closed transitional terms to qualify different elements of the claim accurately conveys the intended meaning and is as definite as the subject matter permits. Use of only the closed transition "consisting of" would not be appear to convey the intent that the nucleic acid can contain nucleotides besides those encoding beta secretase, which from the Examiner's comments regarding initiation codons and stop codons, it appears the Examiner is in agreement that it is appropriate to encompass. Even if applicants specified that the nucleotide consisted of an initiation codon immediately before the designated SEQ ID NO: and a stop codon immediately, such a format would appear to exclude the use of an epitope tags used to be used purification (see, e.g., SEQ ID NO:45) or a heterologous signal sequence between the initiation codon and the beta secretase (see, e.g., paragraph 242). No reason is apparent that applicants should have to exclude such embodiments. Accordingly, reconsideration is respectfully requested.

Claims 58, 178, 190, 196, 202, 208, 214 and 220 are rejected on the basis that it is unclear whether the language "comprising a sequence of nucleotides that encodes SEQ ID NO:43..." is intended to limit the claim to the sequence of nucleotides in SEQ ID NO:43 or other designated SEQ ID NO. The underlying issue with these claims is the same as that discussed above, although the language presently used in claims 58, 178, 190, 196, 202, 208, 214 and 220 is different. Accordingly, applicants have amended claims 58, 178, 190, 196, 202, 208, 214 and 220 in similar fashion to claims 48, 114, 122, 131, 139, 147, 155, 163 and 171. The Examiner is asked to reconsider the definiteness of these claims in view of the explanation provided above.

2.2. 35 USC 102

Claims 48, 51-57, 114-121, 122-129, 130-137, 138-145, 146-153, 154-161, 162-169 and 170-177 stand rejected as allegedly anticipated by Guerney. It is believed that the rejection is based on the Examiner construing the claims as not being limited to nucleotides encoding beta secretase that consist of the designated SEQ ID NO. Although SEQ ID NO:5 of Guerney might encode present SEQ ID NO:43 as part of a longer protein, Geurney's SEQ ID NO:5 does not consist of nucleotides encoding present SEQ ID NO:43. Many other nucleotides encoding other parts of beta secretase are also present in SEQ ID NO:5 of Guerney.

Applicants acknowledge that the Examiner has not rejected claims 58-69, 178-183, 240-258, 184-189, 259-277, 190-195, 278,296, 196-201, 297-313, 202-207, 314-332, 208-213, 333-351, 214-219, 352-370, 220-225 and 371-389 over Gurney. These fragments are distinguished for the reasons given above, and provided by the Examiner. Regarding the Examiner's remarks, applicants qualify that although stop codon and/or initiation codons may well be present, they are not actually required by the claims. Also, although the beta-secretase amino acids of the expressed proteins consist of SEQ ID NO:43, 58, 59, 60, 67, 68, 69, 70 and 74, as stated by the Examiner, the claims do not exclude the possibility of other amino acids not encoding beta secretase (e.g., an epitope tag for purification).

2.4 35 USC, 112, first paragraph

Dependent claims 63, 184, 190, 196, 202, 208, 214, 220, and 226 directed to antibodies that specifically bind to truncated forms and lack significant immunoreactivity with a full length beta secretase stand rejected on the basis that the specification does not teach how to produce antibodies that lack significant immunoreactivity with full-length beta secretase. In reply, although the specification may not provide specific details for every fragment, the general principles for making an antibody that specifically binds to a fragment of a protein without binding to a full-length protein were known in the art by the priority date of the application and are referred to in the specification (see paragraph 219, and US 5,721,130 cited therein). As discussed in the '130 patent, one uses a short peptide from a unique end of the fragment not present in the full length molecule as the immunogen. E.g., for a fragment ending at residue 452

of beta secretase one could use a fragment of about six amino acids ending at residue 452 as the immunogen. This immunogen induces some antibodies that are end-specific to the fragment; that is, they bind to an epitope which only exists when the fragment is separated from its full-length molecule. These antibodies can be identified by screening antibodies for differential binding to the fragment versus the full-length molecule. The Examiner is requested to reconsider the enablement of the above claims in light of the above explanation. Nevertheless, if the Examiner remains unpersuaded but is willing to allow other subject matter, applicants will consider canceling the dependent claims at issue.

2.5 Obviousness-type double patenting rejection

Applicants provide a terminal disclaimer with respect to 09/724,569. The provision of a terminal disclaimer should not be construed as acquiescence in the merits of the rejection. Should the Examiner believe either of these cases raises any double patenting issues, she is requested to notify applicants.

2.6 Statutory double patenting rejection.

Claims 114, 48, 131 and 171 stand provisionally rejected as claiming the same invention as claims 57-60 of 09/724,569. The rejection is moot because claims 57-60 were cancelled from 09/724,569.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

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Attachments
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